

An Introduction to Armstrongs' Map

BY JOHN STRAWHORN, M.A., Ph.D.

The 18th century was an important period in the development of Scottish cartography.¹ After the Jacobite Rebellion, the Great Military Survey of the Highlands was initiated in 1747, extended to cover the Lowlands as well, and completed in 1755. This 1,000 yards-to-an-inch survey, associated with the name of General William Roy, provided the inspiration and example for the Ordnance Survey which was officially instituted early next century. The manuscript maps of the Military Survey² were not generally available to cartographers till 1807, but, notwithstanding, civilian demand for maps in later 18th century Scotland was met by a flood of commercially produced maps which, relying on more accurate surveying techniques than the maps of previous generations, showed steady improvement in character. Many of the new national maps were based on the large-scale county maps which surveyors were compiling; and these county maps were themselves based largely on estate plans. James Dorret's 'General Map of Scotland' (1750) marks the beginning of the new era. And among the dozen well-known map-makers who followed his lead in the next half-century were Andrew Armstrong and his son and partner Mostyn John Armstrong.

THE ARMSTRONGS AND THEIR WORK

Little can be discovered about the Armstrongs. They receive no mention in any of the major national works of reference³; and hardly a trace of them is to be found in local records.⁴ A sketch of their career can, however, be reconstructed from the

1. See *Early Maps of Scotland*, ed. H. R. G. Inglis, Royal Scottish Geographical Society, 2nd edition revised, 1936; also "List of Maps of Scotland" in the Mitchell Library, Glasgow (G 446075).
2. King's Library, British Museum (Maps c.9.6.)
3. There is an uninformative mention of Mostyn Armstrong in Watt, *Bibliotheca Britannica*, copied in *Nouvelle Biographie Generale*, and *Imperial Dictionary of Universal Biography*. Colonel John Armstrong (see *Dictionary of National Biography*) may have been a relation.
4. v.infra for Mostyn Armstrong in Norfolk; absolutely no record of them has been found in Ayrshire.

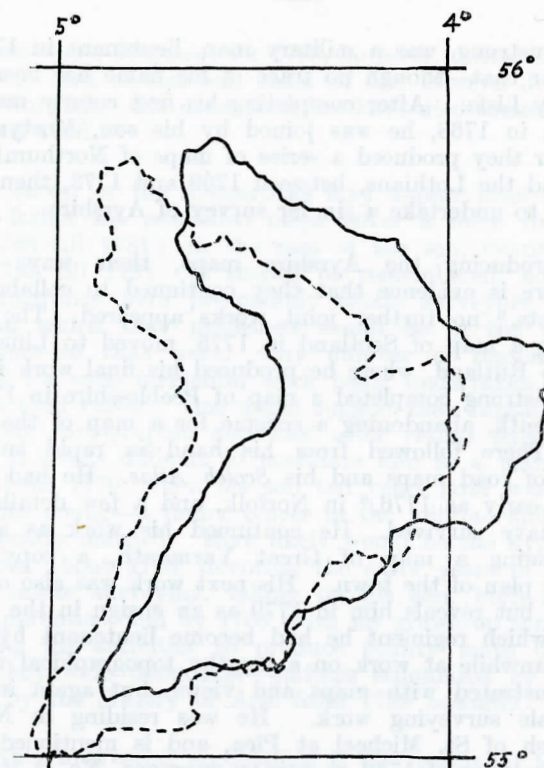


FIG. 13—Outline of Armstrongs' Map of Ayrshire (continuous line) as compared with the modern map (broken line).

limited evidence that is available⁵. They may have been English—at least it is a safe guess that they came from the Borders, for that part of the country is the home of the Armstrongs, and it was there that they began their work, with maps of Durham, Northumberland, and Berwick. The father,

5. Their works are dealt with in one contemporary and two modern publications: Richard Gough, *British Topography*, 2 vols., 1780; T. Chubb, *Printed Maps in the Atlases of Great Britain and Ireland, 1579-1870*, 1927; *Early Maps of Scotland*, op.cit., 1936. *Catalogue of the Printed Maps, Plans, and Charts in the British Museum*, 1885, was also consulted. In a quest for supplementary references, assistance was rendered by the following—S.Ldr. B. K. D. Robertson, Secretary of the Royal Scottish Geographical Society; G. S. Darlow, M.A., A.L.A., Sub-Librarian of the University Library, Durham; E. Austin Hinton, B.A., F.L.A., City Librarian, Newcastle-upon-Tyne; Francis J. Cooper, Director, and F. T. Baker, Deputy Director, City of Lincoln Libraries; P. Hepworth, M.A., F.L.A., F.R.S.A., City Librarian, Norwich; W. R. M. McClelland, F.L.A., City Librarian, Leicester; and R. A. Skelton, F.S.A., F.R.Hist.S., Superintendent, Map Room, British Museum. Acknowledgment must also be made to the staff of the National Library of Scotland, Edinburgh, and the Mitchell Library, Glasgow.

Andrew Armstrong, was a military man, lieutenant in 1768 and captain after that—though no trace of his name has been found in the Army Lists. After completing his first county map, that of Durham, in 1768, he was joined by his son, Mostyn John, and together they produced a series of maps of Northumberland, Berwick, and the Lothians, between 1769 and 1773, then moved to the west to undertake a similar survey of Ayrshire.

After producing the Ayrshire maps, their ways parted. Though there is evidence that they continued to collaborate in some respects,⁶ no further joint works appeared. The father, after issuing a map of Scotland in 1775, moved to Lincolnshire and then to Rutland, where he produced his final work in 1781. Mostyn Armstrong completed a map of Peeblesshire in 1775 and also went south, abandoning a scheme for a map of the Border country.⁷ There followed from his hand in rapid succession two books of road maps and his *Scotch Atlas*. He had settled, possibly as early as 1776,⁸ in Norfolk, and a few details of his life there have survived. He continued his work as a cartographer, issuing a map of Great Yarmouth, a copy of an unpublished plan of the town. His next work was also of minor importance, but reveals him in 1779 as an ensign in the Norfolk Militia, in which regiment he had become lieutenant by 1782.⁹ He was meanwhile at work on a lengthy topographical work on Norfolk, illustrated with maps and views, but again involving no large-scale surveying work. He was residing in Norwich, in the parish of St. Michael at Plea, and is mentioned in the Norwich Directory of 1783 as county surveyor, No. 2 Red Well Street. He married a daughter of Clement Ives, Esq., of St. Martin at Palace. He was intimate with the local literary characters.¹⁰ In 1789 he delivered a lecture on the coast of Norfolk, and in 1791 had it published as a pamphlet. This was his last work, and no later reference to him has been found.

6. John Thomson, *Atlas of Scotland*, 1832, vi, gives joint authorship of the map of Peeblesshire; Gough, I, 538*, gives joint authorship of the map of Lincolnshire; in the preface to the *Post Roads between London and Edinburgh*, Mostyn Armstrong acknowledges that it is based on surveys in which his father had collaborated; their works continued to be advertised together, e.g. the *Companion to the Map of Peeblesshire* lists "Maps Surveyed and Published, by Captain Armstrong & Son."
7. In the Peeblesshire *Companion* there is listed as a forthcoming work, "The Borders between North and South Britain." There is no record of its having been published. Its price was to be 10/6.
8. Mostyn John Armstrong, county-surveyor, published proposals for a map of Norfolk—8 sheets, 2 guineas to subscribers—Nov. 1, 1766 (Gough, II, 36). This must be a misprint for 1776. This map was advertised as 'publishing by subscription' in the *Post Roads between London and Edinburgh*, 1777. The proposals were referred to in a review of the *Essay on the Coast of Norfolk in the Gentleman's Magazine*, lxii (1792), 455. He must have altered his intentions—the map was never produced. Gough (in 1780) wrote that Mostyn Armstrong was employed in making a topographical survey of the county of Norfolk for a History of Norfolk (Gough, II, 38*).
9. J. R. Harvey, *Military History of Norfolk*, Vol. IV, typescript. Information from Norwich City Librarian.
10. The information in these last three sentences comes from John Chambers, *A General History of the County of Norfolk*, Norwich, 1829, Vol. II, 1316.

The *Gentleman's Magazine* for 1796, however, contains an obituary notice of 'Mrs. Armstrong, relict of Mr. Mostyn J. Armstrong, late of Norwich.' He must therefore have died sometime between 1791 and 1796.¹¹

The career of the Armstrongs may appear brief—in the case of the father his published maps cover a mere thirteen years from 1768 till 1781; in the case of the son, twenty-two years from 1769 till 1791. It should be remembered, however, that the Armstrongs were presumably estate surveyors,¹² and that anything which they published would be in the nature of a by-product of that work. Any number of reasons might be adduced for such incidental work being undertaken at only one stage in their career. One might suggest that Captain Armstrong began his cartographic activities after retirement from the army, though it seems difficult to postulate him as a man well up in years about 1770, when his son ten years later was apparently still quite young—a junior officer in the militia—and apparently only recently married. More likely would be the hypothesis of a man born about 1720, devoting the early years of his working life to estate surveying, taking on his son, born about 1750, as an apprentice, and by 1768, with his grown-up son as partner, extending his activities to produce county maps of the areas where they were operating,—perhaps stimulated by the awards offered by the Society of Arts from 1759 onwards.

Another interesting speculation is the reason for the break-up of their partnership. It followed immediately after the preparation of their map of Ayrshire, and it is tempting to ask if the rather odd mystery—discussed later—about the two editions of the Ayrshire maps was in any way associated with the parting of their ways.

One tentative conclusion might be ventured. There are rather strong suspicions that the son was not a particularly capable surveyor. He carried out only one county survey on his own, and even in this instance there is room for doubt if he worked unaided.¹³ As for his other productions, they have come in for some severe criticism of one kind or another.¹⁴ On the other hand, the father turned out, one after the other, a series of county maps, only one of which (Ayrshire) has been

11. *Gent. Mag.*, lxvi (1796), 617. There is also an obituary notice of an unidentifiable 'Mr. Armstrong' in 1794, 'Apr. 4. At Skirbeck, Co. Lincoln, aged 75, Mr. Armstrong.' *Gent. Mag.*, lxiv (1794), 387.
12. No evidence of such work has, however, been found.
13. Thomson, *Atlas of Scotland*, op.cit., vi, gives joint authorship.
14. For these criticisms, v. infra. Besides Thomson's criticisms of the Ayrshire and Peeblesshire maps, Gough criticised the *Scotch Atlas*, the *Gentleman's Magazine* had no great opinion of the *Essay on the Coast of Norfolk*, while the *History of Norfolk* has been described as an 'impudent plagiarism.'

criticised, and for no obvious reasons.¹⁵ One might therefore dare guess that the story was one of a competent Andrew Armstrong taking his son Mostyn into partnership in the production of county maps; Mostyn being found wanting; the partnership dissolved as a result of some difficulty arising out of the Ayrshire map; the father continuing on his own, at a slower pace; and the son going his own ways, trying several ventures but without any real success because of his inherent limitations.

List of Works by Andrew and Mostyn John Armstrong.

- 1768** DURHAM. The County Palatine of Durham. Surveyed by Capt. Armstrong and engraved by T. Jeffreys. 37 inches by 48 inches, in 4 sheets. Scale $6\frac{3}{4}$ inches to 7 miles. With an inset plan of Durham on a scale of $3\frac{1}{4}$ inches to $\frac{1}{4}$ mile. Dedicated to the Earl of Darlington.
- 1791** A second (corrected) edition published by J. Cary.
- 1769** NORTHUMBERLAND. Map of the County of Northumberland with that part of the County of Durham that is north of the River Tyne. Lieut. Andw. Armstrong and Son. Engraved by Thos. Kitchen. 9 sheets. Taken from an Actual Survey and laid down from a Scale of An Inch to a Mile. With a Plan of the Town of Berwick. £1 11s 6d. The first map of the county on such a large scale, showing towns, villages, farmhouses, cottages, churches, seats and noted houses (with owners' names), windmills, turnpike roads (measured off in inches), country roads, Roman roads, stations, and camps, woods, parks, wards, hills, coal pits, lead mines. For this map the Society of Arts awarded a bounty of fifty guineas (Chubb, xv).
- 1769** *A Companion to Capt. Armstrong's Map of Northumberland.* London, 8vo, printed by W. Prat, 40 pp. The list of subscribers includes four Armstrongs.
- 1770** A New and Correct Map of the County of Northumberland. On a reduced scale of 10 miles to $3\frac{3}{4}$ inches. Price 3/6. To be sold only to the subscribers or purchasers of both (Gough, II, 69).
- 1781** A reprint of the 1770 map.
- 1781** A reprint of the 1770 map in *The Large English Atlas*.
- 1796** A further reprint of the 1770 map.

- 1771** BERWICK. Map of the County of Berwick. Capt. Armstrong and Son. Engraved by A. Bell. 29 inches by 41 inches, in 4 sheets. Scale One Inch to a Mile. With

a plan of Greenlaw, $6\frac{1}{2}$ inches by $9\frac{1}{2}$ inches, on a scale of 23 inches to a Mile. Price 15/-.

1772 A reduced version, on one sheet 14 inches by 20 inches, scale $\frac{1}{2}$ inch to a Mile. Engraved by J. Ainslie. Price 2/6.

- 1773** LOTHIAN. Map of the Three Lothians—Haddington, Edinburgh, and Linlithgow. Andrew and Mostyn John Armstrong. Engraved by Thos. Kitchen. 6 sheets, $16\frac{1}{2}$ inches by $19\frac{3}{4}$ inches. Scale One Inch to a Mile. With inset plans of Edinburgh and Haddington. Price £1 11s 6d.

1775 Plan of the City, Castle and Suburbs of Edinburgh. Revised version of the Lothians inset plan. $17\frac{3}{4}$ inches by $13\frac{3}{4}$ inches, on a scale of $10\frac{1}{2}$ inches to a Mile. Price 2/-.

1778 Another edition of the Plan of Edinburgh, in Arnot's *Edinburgh*.

1787 Another edition of the Plan of Edinburgh.

- 1775** AYRSHIRE. A New Map of Ayrshire. Captain Armstrong and Son. Engraved by S. Pyle. 6 sheets, approximately 20 inches by 22 inches. Scale One Inch to a Mile. With an inset plan of Ayr, $16\frac{1}{2}$ inches by 13 inches, scale $13\frac{3}{4}$ inches to a mile. Price £1 1/-.

1774 A reduced version on one sheet, 16 inches by 20 inches scale $3\frac{1}{8}$ miles to an inch. Engraved by Alex. Baillie. Price 3/6.

- 1775** SCOTLAND. Bowles's New Pocket Map of Scotland. Captain Armstrong. 17 inches by 22 inches. Scale 15 miles to an inch.

- 1775** PEEBLESSHIRE. Map of the County of Peebles or Tweeddale. Mostyn Jno. Armstrong. Engraved by S. Pyle. 2 sheets, each 16 inches by 25 inches. Scale about One Inch to a Mile. Price 10/6. Dedicated to Rt. Hon. William Douglas.

1775 *A Companion to the Map of the County of Peebles, or Tweeddale.* Edinburgh, 8vo., 116 pp. Price 2/-.

Contains a preface on county surveying, a geographical description of Tweeddale, a list of subscribers, and an advertisement of Armstrongs' Maps, with prices.

- 1776** ROAD MAP. *An Actual Survey of the Great Post Roads between London and Edinburgh, with the Country three miles on each side.* By Mostyn J. Armstrong. London, 8vo. 44 plates, scale 2 miles to an inch. Dedicated to Thomas Pennant. In the Preface Mostyn wrote (in the third person) that '300 miles of the road were taken from Surveys made

15. v. infra.

by his father, Captain Armstrong, and himself; and that the remainder was laid down from his own observations, adopting such actual surveys as he could assuredly confide in.' The proposals for this work, issued in May, 1773, had promised also the roads via Carlisle, and Armstrong had also anticipated including historical extracts, etc., but the volume as published was limited to the roads via Newcastle, 'as a specimen of such future surveys on the same plan as he means to undertake so soon as the public opinion is ascertained with regard to this.' (Preface, p. 2).

1783 A second edition.

1777 ROAD MAP. *Armstrong's Actual Survey of the Great Post Road between London and Dover, with the Country Three Miles on Each Side.* Une Vue Actuelle . . . Par Mostyn Jno. Armstrong. 8vo.

1777 ATLAS. *A Scotch Atlas or Description of the Kingdom of Scotland.* Mostyn John Armstrong. 4to. Contains an outline map of Scotland and a Road Map, both 6 inches by 8 inches; a map of environs of Edinburgh, $5\frac{3}{4}$ inches by $7\frac{1}{2}$ inches; and 27 county maps, usually $5\frac{1}{2}$ inches by $7\frac{1}{2}$ inches, with scales ranging from 5 miles to 25 miles to an Inch. Sayer and Bennett's imprint (Chubb, 380-381, lists it and reproduces the title page).

1787 Second Edition, with Robert Sayer's imprint.

1794 Third Edition, with Laurie and Whittle's imprint.

1779 LINCOLNSHIRE. Map of Lincolnshire, Comprehending Lindsey, Kesteven, and Holland. Surveyed 1776-7-8. Captain Andrew Armstrong. Engraved by Stephen Pyle. Size 4 feet 9 inches by 6 feet $9\frac{1}{2}$ inches, in 8 sheets. Scale One Inch to a Mile. With plans of Grimsby, Louth, Boston, and Spalding. Dedicated to Duke of Ancaster and Esteven, Marquis and Earl of Lindsey.

1778 *An Index to Captain Armstrong's Map of Lincolnshire.* Issued gratis to subscribers to the map, in advance.

1781 A reduced version, measuring approximately 21 inches by 27 inches. Published by R. Sayer. With engraving of Boston Church and view of Lincoln from the south-east.

1787 A reprint of the reduced version in *The Large English Atlas*.

1794 Another reduced edition. Published by Laurie and Whittle.

1779 GREAT YARMOUTH. Plan of Great Yarmouth by Henry Swinden, copied by Mostyn Jno. Armstrong, County Surveyor. Engraved by S. Pyle. Swinden's Map was

sold to the corporation, from whom Armstrong had leave to take a copy, June 1779. Size of map, about 29 inches by 16 inches.

1803 Another edition published by I. D. Downes of Great Yarmouth.

1779 PLAN. Plan of Encampment of the First or Western Battalion of the Norfolk Regt. Militia, near Aldborough in Suffolk; with a Sketch of its Environs. Drawn by Mostyn Jno. Armstrong, Ensign, Augt. 26, 1779. Engraved by J. Page.

1781 RUTLAND. The County of Rutland. Capt. Andw. Armstrong. Engraved by Jno. Luffman. Published by Sayer and Bennet. Scale One Inch to a Mile. With plan of Oakham.

1787 A reprint in *The Large English Atlas*.

1779-1781 NORFOLK. *History and Antiquities of the County of Norfolk.* Norwich. Printed by J. Crouse for M. Booth. Published in sixpenny parts, and bound in 10 volumes, 8vo. The topographical descriptions are by Mostyn John Armstrong, to whom the work as a whole is usually attributed, though the Preface speaks of 'The Editors' and Gough mentions 'several gentlemen' (Gough, II, 38*). It includes a clearly engraved map of Norfolk and a plan of 'The Venta Icenorum of the Romans' now Castor; and views. Engraver, S. Pyle.

1791 NORFOLK. *Essay on the Contour of the Coast of Norfolk.* An address read to the Society for the Participation of Useful Knowledge, Norwich, 20th October, 1789. By Mr. J. Armstrong, Land-Surveyor, then a Brother of that respectable Association, and now a Member of the Society of Arts, Etc., in London. Printed as an 18 page 4to. pamphlet and published in Norwich by Crouse and Stevenson, 1791. John Chambers (1829) says the MS. is in Norwich Public Library; it cannot now be found; though a copy of the pamphlet in the Coram Norfolk Library bears an inscription in (presumably) Armstrong's writing 'To the Society for the Participation of Useful Knowledge, Presented by the Author.'

There was another 18th century cartographer called Marcus Armstrong. He contributed several items to the *History of Norfolk*, which might suggest that he was a relation of Mostyn Armstrong. Marcus Armstrong produced 'A New Map of Scotland or North Britain' (2 sheets, approx. $7\frac{1}{2}$ miles to the inch, published by Sayer

and Bennet, 1782). But this map¹⁶ is very poorly drawn, inaccurate in detail, and the author obviously had not made any use of the Armstrongs' county maps; which tends to suggest that he was not a member of the family. Another map may have been by the same Marcus Armstrong—'Thirty Miles Round Boston, by M. Armstrong Geo(ographer), 14th August, 1775,' which showed military operations to June, 1775.

Two other works, listed by Gough as by Colonel Armstrong, had no connection with Andrew or Mostyn Armstrong: *Proposals for Draining the Fens and Amending the Harbour of Lynn*, 1724 (by Colonel John Armstrong (1672-1742), Chief Engineer); an account of Curious Monuments in Cumberland, *London Magazine*, August, 1775.¹⁷

The work of the Armstrongs has never been adequately, assessed. Modern eyes have found their county maps 'clear and helpful' but, aware of the fact that the Armstrongs incurred various criticisms in the past, have noted this as 'puzzling' and suspended judgment.¹⁸ We have already remarked that (with one exception) all criticisms are directed at works produced by Mostyn Armstrong. As far as the county maps with which Andrew Armstrong was associated, they are attractive and neatly engraved works; they are detailed and seem reliable, as will be seen from an examination of the Ayrshire sheets.¹⁹ They must be accorded second place after those of John Ainslie, but apart from this outstanding rival, only Charles Ross was in the same class as far as 18th century Scottish map-makers were concerned.²⁰ Regarding Andrew Armstrong's 'New Pocket Map of Scotland' a modern critic remarks simply that it was 'merely copied from another source . . . has no special characteristics of its own.'²¹

The first critic was Richard Gough who in 1780 made an attack on one work. 'Armstrong's *Scots Atlas* is little valued; his pretension to *actual survey* is entirely chimerical: he copies others, ingrafting mistakes of his own, and run over the counties in a strange cursory manner . . . Armstrong has attended to his own and the engraver's profit more than that of the public or their information.'²² An examination of the *Scotch Atlas* confirms that it is not up to late 18th century standards. It was, however, as Gough admitted, neatly engraved, and must have fulfilled a want,

16. This map is not listed in *Early Maps of Scotland*, but there is a copy in the Mitchell Library, Glasgow.

17. Gough, I, 198, 285.

18. *Early Maps*, 38, 40.

19. Gough described 'Northumberland' as 'a capital map,' though one town was omitted (Gough, II, 69).

20. As far as quantity of work was concerned, Ainslie surveyed six counties, the Armstrongs four (in Scotland), and Ross three. See *Early Maps*, passim.

21. H. R. G. Inglis, 'Early Maps of Scotland and Their Authors,' in *Scottish Geographical Magazine*, XXXIV (1918), 228.

22. Gough, II, 588.

for new editions came out in 1787 and in 1794.²³ It no doubt proved a handy little reference book for gentlemen's libraries; but from the cartographic point of view, Gough's criticism is perfectly justified. A later work of Mostyn Armstrong's came in for similar criticisms—his *Essay on the Contour of the Coast of Norfolk* was very severely dealt with in a review in the *Gentleman's Magazine*.²⁴ Criticism of another kind is made of his ten-volume *History of Norfolk*—a local historian has described it succinctly as 'an impudent plagiarism' of Blomefield's *History of Norfolk*.²⁵

Another critic was John Thomson, who referred to the Armstrongs' maps of the counties of Peebles and Ayr in the most uncomplimentary terms. Of the former he declared that 'it never stood high, and is now little attended to.'²⁶ The map of Ayrshire he singled out for special abuse. 'The proprietors in the county saw the errors of this map to be so great, that various efforts were made to have a new one, or to get it improved, which never met with suitable encouragement.'²⁷ Of these criticisms a modern commentator remarks: 'At this far-off period it is not easy to say where the faults lay, but as Thomson lived about thirty years later than Armstrong, there was no question of rivalry, and the remarks as to their inaccuracy were very pointed. One must, therefore, assume that Thomson did not write his notes without some justification.'²⁸ We must point out that Thomson's criticisms of Armstrongs' inaccuracies are vitiated by errors of his own. Though the Peeblesshire map is by Mostyn Armstrong alone, Thomson attributes it to both father and son; and he dates it wrongly as 1774. As far as the Ayrshire map is concerned, one might suspect that he had not examined it very carefully, for it comprises six sheets (and not four as Thomson seemed to believe).²⁹

In the light of these various doubts which have been expressed of the accuracy of the work of the Armstrongs we have therefore approached the Ayrshire map in a suitably critical frame of mind. An examination of the Ayrshire sheets, however, suggests no reason to suspect their accuracy in any but incidental details. Andrew Armstrong may be described as a generally competent, though not brilliant, map-maker, who deserves an honoured place among his contemporaries. His son Mostyn Armstrong, did some good work in association with his

23. Chubb, 380, describes it as 'a very nicely prepared atlas.'

24. *Gent. Mag.*, lxii (1792), 455.

25. Walter Rye, *An Index to Norfolk Topography*, 1881, xiv.

26. Thomson, *Atlas*, vi.

27. Thomson, *Atlas*, iv.

28. Inglis, *S.G.M.*, xxiv, op.cit., 228.

29. Thomson, op.cit.

father. In particular, his *Post Roads* was a well-produced and useful publication which went through several editions. His other efforts are of no especial value.

THE AYRSHIRE MAP

How the Armstrongs carried out a county survey is described in the *Companion* to the Map of Peeblesshire.³⁰ 'Having a *Base line* measured with a *Chain*, &c. as recommended (*sic*) by Mr. McKenzie,³¹ in his treatise on *Maratime (sic)* surveying, on a space not obstructed by an inequality of level, from the extremities of which, by the intersection of *angles*, taken by a good *instrument*, not calculated to *glitter*, without the means of being more useful, the *horizontal* distance of two opposite eminences was deduced by *protraction*, and proved by *logarithms*. These terminal points being ascertained, the gradual progression of triangles, *in infinitum*, is too obvious to be particularly described. I would not, however, be understood to obtrude this method in preference to the merits of others; my sole motive is to expose the absurdity of *wheeling* a surface, where every inequality must add error to error.' Once triangulation was completed, details were filled in, and the Armstrongs like other surveyors would find estate plans very useful. There were difficulties about these details. 'To please even a few, of taste and judgment, is a satisfaction any author may rest contented with, and not repine at the grateful public, though some few interested individuals may withhold their approbation. A *Mechanical* land-surveyor will condemn the superficial measurement of a county, while the penurist will grudge a subscription of one guinea towards some hundreds; nay, a gentleman, whose property does not exceed *twenty acres*, will find fault, *because the name was not engraved within the bounds of his estate*: from a scale of one inch to a mile.'³²

In Ayrshire, as in several other instances, the Armstrongs issued a large-scale county map on several sheets, and also a smaller-scale version on one sheet. On comparing these two editions, one is immediately struck by an odd discrepancy in dates. The larger-scale one-inch-to-the-mile map is clearly (and twice) dated 1775. The small-scale version is inscribed 'A Map of Ayrshire, Reduced from Captain Armstrong's six sheet Map, Published in 1774.' Though this inscription is ambiguous, another annotation on the map confirms that this smaller version

was indeed published in 1774. But how could a map issued in 1774 be based on another which did not appear till a year later? Confusion is deepened by Gough who gives 1774 as the date of the six-sheet map,³³ and by Thomson, who says that 'Captain Armstrong and his Son, in 1772, 1773, 1774, and 1775, published a Map of Ayrshire, on four (*sic*) sheets.'³⁴ The modern authority allocates the six-sheet map of Ayrshire to 1773 on the grounds that it must have been published before the single-sheet version of 1774.³⁵

An examination of the career of the Armstrongs indicates that their Lothians maps were issued in 1773, while before 1775 Mostyn had moved to Peeblesshire. It would certainly be unwise to conclude from this, however, that their survey of Ayrshire did not begin till 1773 or that the Map of Ayrshire must have been issued before 1775. Often before a map of an area was published they must have been well ahead with the preparation of their next. Indeed, in one case it seems possible that the anticipated sequence of publication was reversed. Northumberland may have been surveyed before Durham, though the maps of the latter appeared first.³⁶ Not a great deal of light may be shed on the problem by an examination of the Map itself; save that the surveying work could hardly have been completed before the autumn of 1772.³⁷ Possibly the sheets were issued serially,³⁸ in which case we might guess that they appeared between 1773 and 1775, and that before S. Pyle, who was also engraving the Peeblesshire maps, had completed the publication of the six Ayrshire sheets, the single-sheet reduced version had been issued (in 1774) by Alexander Bailie.

The Map of Ayrshire is printed on six sheets of Imperial size (30½ ins. x 22½ ins.). The sheets have been impressed with copper plates which approximate to 22¾ ins. x 20¾ ins. The map area of each varies, measuring 21½ ins. x 19½ ins., with an additional ¾ in. border on the appropriate edges to allow the six sheets to be joined into one large map. In fact, the edges do not form an absolutely perfect fit.³⁹ Roads, rivers, and other features, however, have been carefully correlated where the sheets join. There is no overlapping of names from one sheet to another, so that each forms a self-contained unit.

30. *Companion*, Preface, v. This was written by Mostyn Armstrong; presumably the same method of survey had been followed in Ayrshire.

31. It is curious that Armstrong here cites the work of Murdoch Mackenzie, a hydrographic surveyor, as his guide, rather than one of the numerous text-books by contemporary land-surveyors. Note by R. A. Skelton.

32. *Companion*, Preface, vi, vii.

33. Gough, II, 652.

34. Thomson, *Atlas*, iv.

35. *Early Maps*, 94.

36. On the Durham map (1768) the designation is Captain Armstrong, but on the Northumberland map (1769), whose nine sheets must have taken a considerable time to engrave, it is Lieutenant Armstrong.

37. The Saltcoats Canal is shown, which was 'finished and navigated September 19, 1772.' *Stat. Acct.*, VII, 15.

38. As might be inferred from Thomson, iv.

39. Probably due to paper shrinkage.

The top-right sheet bears the title, 'A New Map of Ayr Shire, Comprehending Kyle, Cunningham, & Carrick. The Scale, one Inch to a Mile. By Captain Armstrong and Son and Engrav'd by S. Pyle. MDCCLXXV.' This is set in a ponderous and somewhat inartistic formation of rocks.⁴⁰ Adjoining is an illustration of papingo shooting at Kilwinning,⁴¹ against an indeterminate landscape background. The mid-left sheet carries the dedication, 'To the Nobility, Gentry, and all the Subscribers for the County of Ayr, This Map, is most Humbly Inscribed By their most Obedient Humble Servants, A. & M. Armstrong.' This sheet also contains a compass rose. The mid-right sheet gives an 'Explanation' or key to conventional signs. The bottom-left sheet has the imprint, 'Publish'd according to Act of Parliament, January 10th, 1775.'⁴² The bottom-right sheet contains two scale lines, and is largely occupied by a town plan of Ayr. This is on a scale of $13\frac{1}{2}$ inches to a mile, and measures 16 ins. x 12 ins. within a rather hideous border. In the bottom-right-hand corner appear the engraver's credentials, 'Pyle, sculp; Angel Court, Snow Hill, London.'⁴³ The very simple outside border of the map indicates latitude and longitude at minute intervals, and map reference letters corresponding with the ten-minute-interval grid which covers the map.

The orientation of the map is as accurate as contemporary circumstances permitted, latitude being only a few minutes out, though longitude is displaced rather more. The map is oriented to true north—not (like most county maps of the time) to magnetic north: this was as recommended by Murdoch Mackenzie. The centre of Ayr is, according to the Armstrongs, $55^{\circ}31'N$; $4^{\circ}25'W$. The more exact triangulation surveys which followed in the closing decades of the century brought increased accuracy. Ainslie's latitude of Ayr corresponded with that of the Armstrongs, but the error of longitude was reduced, Ayr being $1^{\circ}27'$ West of the Edinburgh Meridian which the patriotic Ainslie adopted as his prime line.⁴⁴ By the beginning of the 19th century Arrowsmith⁴⁵ had located the centre of Ayr as $55^{\circ}28'N$; $4^{\circ}37'W$, and by Thomson's time⁴⁶ the orientation was almost exactly that of the modern Ordnance Survey Map⁴⁷— $55^{\circ}28'N$; $4^{\circ}39'W$.

40. Hidden among the rocks is the inscription 'Page Se.'

41. For this form of archery at Kilwinning, see *Stat. Acc.*, XI, 172; Walter Scott, *Old Mortality*; Paterson, *Cunninghame*, 484; W. L. Ker, *History of Kilwinning and other local works*.

42. The Engraving Copyright Act of 1734 (8 Geo. 2, c.13) required the name of the proprietor and the date of first publication to be engraved on each print.

43. Pyle also engraved the Peeblesshire maps, and in the *Companion*, viii, Mostyn Armstrong noted 'the peculiar disadvantage of being obliged to send the drawings to London' so that he was unable to correct the plates.

44. John Ainslie, 'Scotland drawn from a Series of Angles and Astronomical Observations,' 1789 and later editions. It is curious to note that Hermann Moll in 1714 was very accurate in locating Ayr; see *Early Maps*, Plate IX.

45. Aaron Arrowsmith, 'Map of Scotland from Original Materials,' 1807.

46. Thomson, *Atlas of Scotland*, Plate IX.

47. O.S. One Inch Map, 7th series, Sheet 67, 1955.

The scale of the map is given as one inch to a mile, and was draughted at $69\frac{1}{2}$ miles to one degree, as shown on the first scale line. These were Statute miles.⁴⁸ The second scale line indicates geographical miles on the equivalent of 60 miles to a degree.

The outline of the Map of Ayrshire is carefully drawn, and remarkably accurate in detail. It is less than satisfactory only along the Carrick coast and in the remoter parts of the eastern upland boundary. The ancient division of the county into three baileries—Cunningham, Kyle, and Carrick—is shown, with their boundaries on this otherwise monochrome map hand-coloured green, red, and yellow respectively.⁴⁹ No parish boundaries are indicated, and though the key suggests a particular lettering for parish names, in fact this is not followed.⁵⁰

Now it is possible to turn to a detailed examination of the map proper, and consider the physical features of Ayrshire as represented, and then the cultural landscape.

PHYSICAL FEATURES

The coastline is given accurately throughout the greater part of its length. The principal bays and headlands are clearly defined, though (as indicated above) the Carrick coast is less satisfactory. A set of wave-lines symbolises shallow water and emphasises the coast line. Along part of the northern and central coast these are traversed by a mysterious dotted line which is perhaps meant to suggest low water mark. Islets off the coast are not at all exact in their outline. Ailsa Craig has been displaced to allow its inclusion. It is represented by an unsatisfactory out-of-scale elevation drawing; and though its precise location is noted, this is done in a clumsy fashion. Along the central coast, reefs and rocks are marked with a great deal of care, but further south they go unnamed.

The main rivers have been exactly surveyed, and all tributaries are shown, though with decreasing accuracy as the major streams are left. A large number of lochs is shown. Several of these no longer exist—they have disappeared through silting and drainage. But that the record was not complete is instanced by the absence

48. The Statute mile—also known as the 'measured' or 'English' mile—was of 1,760 yards as compared with the longer (and very variable) old 'British' or 'computed' mile and the 'Scots' mile of 1,984 yards.

49. The set in the Carnegie Library, Ayr, is so coloured. For the baileries, see *Gazetteer*.

50. This lettering is used to indicate parish towns; but certain 'market towns' which are also parish towns appear in capitals; and the parish of Loudoun, which has no parish centre of that name, is not mentioned; the same lettering is also used for various physical features.

of Lochlea Loch, which is known to have existed then.⁵¹ The outlines of the lochs, especially in the remoter uplands of Carrick, are not accurate. Loch Goosie is amusingly given the shape of a goose.

Relief is conventionally represented by the then-current convention of hill features drawn in perspective and shaded to suggest a light from the north west. The crude pictographs give little indication of altitude. Only one measurement is attempted: 'Misty Law, by far the Highest Ground in this Part & is 1430 Yds. High from the level of Loch Tanker.' This is grossly inaccurate.⁵²

Considerable areas of 'Flows, Bogs, or Mosses' are marked. These have not been exactly delimited, but approximate to the main areas still existing. It is not possible from this source to judge what variation has occurred in the period since the map was drawn.

THE SOCIAL SCENE

Probably the most fascinating aspect of the Map is the light it sheds on late 18th century Ayrshire—an era of especial interest for students of social and economic change;⁵³ and the period of Robert Burns. At the time when the Armstrongs issued their Map, he was a lad of sixteen working on his father's farm at Mount Oliphant and making his first verses. That this Ayrshire was predominantly a rural community is obvious from a cursory glance at the sheets. The urban settlements are small, industrial installations have to be searched for—interest is focussed on the estates and the farms which occupy the countryside.

The predominant role in the community of the country gentry is stressed by the confident and emphatic representation of the great estates, and the progressive character of the changes they were working on the face of the landscape is revealed. Mansion houses are shown, sometimes beside deserted ruins of abandoned castles, parklands are stippled in, and the countryside is being clothed with new and extensive woodlands. The results of the pioneering work of the Earls of Eglinton and Loudoun are clearly indicated by their considerable areas of park and plantation; there is a network of lesser improved estates wherever there is

fertile lowland; and in all corners of the shire 'Seats and Noted Houses' are attentively recorded. These were the homes of the Subscribers for whom the Armstrongs were catering—they thus deserved special consideration—and one suspects that a certain tactful embellishment would possibly be awarded to those seats whose owners were on the list of subscribers. This may have been the criterion in marginal cases where it was difficult to decide whether to represent a bonnet-laird as occupying a farmhouse or a more exalted residence.

The Armstrongs obviously depended to a considerable extent on estate plans in the preparation of their Map. The great estates, for which plans would be available, would be shown more accurately and in greater detail.⁵⁴ This is true not only of the policies, but of the farms which comprised the estates. The distribution of farms on the map cannot be taken as a fair indication of the actual distribution. In certain districts farms seem to be sparse, whereas many are known to have existed.⁵⁵ It would thus be dangerous to deduce a growth or decline in number of farms over a period by a simple count of those on Armstrongs' and any earlier or later map. The limitations of the Map in this respect may be suggested by remarking that of the Ayrshire farms occupied by the Burns family, the largest is not shown, but the other two (both on large estates) are.⁵⁶ If such shortcomings are kept in mind, however, the real values of the Map may best be appreciated. The majority of the farms shown can readily be identified on the modern One Inch O.S. Map, and it is rare for any to be seriously displaced.⁵⁷ The spelling of farm names is particularly interesting. Occasionally one suspects that errors in transcription have been made by the Armstrongs or by Pyle, the engraver;⁵⁸ but in general where a farm name differs from that now current, one can accept it as a clue to the original name.⁵⁹ Especially in the easter and southern parts of the county, where population has declined in the last two centuries,⁶⁰ many farms have disappeared.

The urban settlements occupy a far less prominent position on Armstrongs' Map than they do on our modern maps.⁶¹ This is natural, for while over three-quarters of the Ayrshire population now lives in communities of more than two thousand inhabitants.

51. It appears, for example, in Thomson's *Atlas* as 'Lochly L.' For this loch, its draining, and the discovery of a crannog, see *Arch. and Hist. Colls. of Ayr and Wigton*, Vol. 2, 17.

52. It is actually, according to the O.S. Map, 1662 feet above sea level, and just about 100 feet less above the level of the loch (Kilbirnie Loch).

53. See p. 150 foll.

54. Sometimes, however, the estate plans would show features which were only at the planning stage. This is the probable explanation of the network of trees around Dalwhatswood farm on Loudoun estate; later maps show no such feature.

55. Compare, for example, Roy's Map, 1755.

56. Mount Oliphant, 75 acres, on the Doonholm estate of Provost Fergusson; Mossiel, 118 acres, on the Loudoun estate, sub-let by Gavin Hamilton, Mauchline solicitor; these are shown, but not Lochlea, 130 acres, belonging to David McLure of Shawwood.

57. Occasionally a farm is duplicated, as if an error in location had been noticed and corrected, but the original placing not erased, e.g. Campbellton, near West Kilbride.

58. For example, Grindstone for Grangestone; Drumpan for Drumjoan; Trigbrae for Craigbrae.

59. For example, Whirlfoord for Hurlford.

60. See Gazetteer, under Parishes.

61. For details of individual towns and villages, v. Gazetteer.

only one-seventh did so two hundred years ago, and fewer than one-quarter by 1800, after a generation of urbanisation. In the middle of the 18th century there were only three towns with more than a thousand inhabitants—the two royal burghs of Ayr and Irvine, and the newer inland town of Kilmarnock, with about 2,000, 3,000 and 2,500 of a population respectively.⁶² By the time of the *Statistical Account* of the 1790s, the lead had been taken by Kilmarnock (5,670), followed by Ayr (3,871), and Irvine (about 3,500), now joined by Saltcoats (2,325), and other ten towns which had risen over the thousand mark — Beith, Newton-upon-Ayr, Maybole, Catrine, Kilwinning, Stewarton, Stevenston, Girvan, Newmilns, and Mauchline, in that probable order of size. There followed a few between five hundred and a thousand of a population — Muirkirk, Wallacetown, Dalry, Cumnock, Galston, Kilmaurs, and Largs. There was a host of villages with from a hundred to five hundred inhabitants, whose exact populations are often difficult to determine — Dalmellington, Tarbolton, Darvel, Riccarton, Auchinleck, Kilbirnie, Ballantrae, New Cumnock, Sorn, Ochiltree, Prestwick, West Kilbride, Fenwick, Symington, Dundonald, Dalrymple, Dailly, Straiton, Colmonell, St. Quivox, Fairlie, and Dunlop. In addition, there was an assembly of twenty-five hamlets of assorted sizes with fewer than a hundred people in each — Alloway, Barr, Barrhill, Coylton, Crookedholm, Crosshill, Crosshouse, Dreghorn, Fullarton, Kirk-michael, Kirkoswald, Loans, Monkton, and Stair are still in existence; Alton, Dalgarnen, Fail, Lochrigg, Loudounkirk, Middleton, Old Dailly, Portincross, Rumford, Shewalton, and Townhead of Greenock have virtually disappeared. The extent of urbanisation at the end of the 18th century is compared with the modern situation in the following table.⁶³

EXTENT OF URBANISATION.

Towns and Villages	c.1798			c.1948		
	Number	Combined Populations	%	Number	Combined Populations	%
Over 2,000	4	16,000	21	31	256,500	79
1,000-2,000	10	13,000	17	12	16,500	5
500-1,000	7	5,000	7	16	12,000	4
100- 500	22	6,000	8	32	9,000	3
Rural.....	—	35,000	47	—	28,000	9
TOTAL.....	43	75,000	100	91	322,000	100

62. These figures are deduced from Webster's parish populations and references in *Stat. Acct.*

63. *Stat. Acct.* and *Third Stat. Acct.*, Ch. 14.

The above list does not correspond exactly with the number of communities on the Map; the later 18th century was a period of economic expansion which saw the creation of a considerable number of new townships, and several of those listed came into existence shortly after the Armstrongs' survey. Of the towns and villages on the Map, almost all were parish centres which had acquired a population nucleus with the development of commerce. The only other towns were Newmilns and Newton, which were *de facto* parish centres; and Wallacetown and Saltcoats which ignored parish boundaries.⁶⁴ Only two parishes were without nucleated settlements—Craigie and Sorn.⁶⁵ Apart from parish centres, there were only about a dozen other communities, most of them mere hamlets. Altogether the Map shows fifty-eight towns, villages, and hamlets, as compared with rather more than a hundred now existing.⁶⁶ Of those which have since come into existence, 23 appear on the Map as farms, estates, or physical features, while the names of the others do not appear at all.

The representation of the towns is not very well done. The crudely simplified layout of Ayr on the county map compares poorly with the carefully-drawn inset plan of the town. There are no equivalent contemporary plans of any other Ayrshire towns.⁶⁷ It is clear that while some effort has been made to provide more than a mere conventional indication of the larger communities, it would be unwise to accept them as exact plans. Beyond indicating the location and approximate size of the towns and villages, the Map provides little detail about them. At Ayr several features are shown, which are, however, more exactly represented on the accompanying plan. Here, and at Irvine, Race Grounds are mentioned.⁶⁸ At Cumnock a burial ground is marked. All the parish churches in the county are shown, with one omission;⁶⁹ in Dailly besides the parish church at New Dailly the site of the old (ruined) church is noted; and a meeting house is shown at Barrhill. The Seceders' Meeting Houses at Kilmaurs and Auchinleck are given.⁷⁰ In fifteen parishes, manse are shown beside the churches, and in all but half a dozen other parishes houses are marked which, though unnamed, may be presumed to be manses.

64. Newmilns actually contained the parish kirk of Loudoun; Newton became a separate parish in 1779; Saltcoats straddled the parishes of Ardrossan and Stevenston, and contained Ardrossan parish kirk; Wallacetown in St. Quivox parish was really an adjunct to Newton.

65. But a village of Sorn or Dalgain was founded c.1775, and the new town of Catrine was also established in the parish in 1787.

66. For the modern list, v. *Third Stat. Acct.*, vi-viii.

67. The earliest town plans of Irvine and Kilmarnock are in Wood's *Town Atlas*, 1819. The layout of some Ayrshire towns on a small scale can be noticed in Taylor and Skinner, *Survey and Maps of the Roads of North Britain or Scotland*, 1776. There is a plan of Catrine in *Stat. Acct.*, XX, 185, and of Saltcoats harbour in *Stat. Acct.*, VII, 46.

68. For details of these and later topics, see *Gazetteer*, Miscellaneous Subjects.

69. Ardrossan parish church, in Saltcoats. *Stat. Acct.*, VII, 45.

70. See *Directory*, Secession Congregations.

The Armstrongs made their Map at a time when Ayrshire was being covered with a network of new roads to cater for the rapidly-growing passenger and goods traffic. So poor were the thoroughfares in early 18th century Ayrshire that wheeled traffic was impossible.⁷¹ Limited progress is shown on Roy's Map (1755) and a comparison with Armstrongs' Map suggests what progress had been made in two decades, especially after the two Ayrshire Turnpike Acts of 1767 and 1774.⁷² Unfortunately, while the Armstrongs in their Key give separate mention to Turnpike roads and Country roads, it is not possible to distinguish these on the Map itself. The location of the tolls indicates that the following roads were turnpiked—Ayr/Irvine; Ayr/Kilmarnock; Ayr/Galston; Ayr/Cumnock; Kilmarnock/Cumnock; Kilmarnock/Irvine; Irvine/Glasgow; Galston/Glasgow; and possibly some others. From another source⁷³ we discover that of the roads noted by the Armstrongs the following may be taken as principal through routes—Edinburgh/Ayr via Galston; Edinburgh/Ayr via Muirkirk and Cumnock; Glasgow/Dumfries via Kilmarnock and Cumnock; Glasgow/Irvine via Stewarton; Greenock/Ayr via Largs; Ayr/Stranraer. Other important roads were Glasgow/Kilwinning; Ayr/Mauchline; and Maybole/Girvan via Dailly. It would be unsafe to assume that constructional work had been completed on any of the other roads. It is certain that in some cases it had not been, even where so shown on the map.⁷⁴ It seems impossible to believe that the twenty-four bridges indicated by Roy had been supplemented by the hundreds that are implied on the Armstrongs' road network. When the map was drawn, hardly enough time had elapsed for the provisions of the second Turnpike Act to be applied, and it is known that large-scale road operations were still being undertaken when John Loudon McAdam returned about 1783 from America to his native Ayrshire, to become a member of the Ayrshire Turnpike Trustees for thirteen years before going south to eventual fame. One may suspect that the Armstrongs based their road system on Turnpike Trust plans, and included roads that were then only planned. A number of roads bordered by hatched lines are probably routes where work was no further than the survey stage. They included a group in the north-west⁷⁵ and in the south.⁷⁶ Several other now-important roads had not even been planned: in the heart of busy north Ayrshire there was no

71. See p. 152 foll., also *Ayrshire Collections*, Vol. 4.

72. 7 Geo. III, c.106; 14 Geo. III, c.109.

73. Taylor and Skinner, *Survey and Maps of the Roads of North Britain or Scotland*, 1776.

74. One road shown (New Cumnock/Coylton) was never constructed; another (Coylton/Dalmellington) actually stopped midway (at Rankinston); and others in South Ayrshire do not follow the routes indicated. Other roads shown (Cumnock/Crawfordjohn via Glenmore; New Cumnock/Moniaie via Glenafton; Straiton/Dalmellington) may have been projected roads, or old drove roads which have since been abandoned. Cf. maps on pp.

75. Kilbirnie/Largs; Dalry/Largs; Dalry/West Kilbride; Kilwinning/West Kilbride.

76. Barrhill/Newton-Stewart; Barr and Straiton/Newton-Stewart.

direct road between Kilmarnock and Stewarton, nor one from Kilmarnock to Dundonald and the coast; in the south there was no link between Ballantrae and Colmonell. One interesting route has now disappeared—the old coast road, which by 1775 was no longer much used, save perhaps by those who wished to avoid the turnpike dues where it had not been improved. It took a more direct route from Stevenston to Irvine, avoiding Kilwinning, and crossing the Garnock by a ford. After Irvine it followed the shore to Troon, then continued along the sand to Prestwick. The map bears at this point an inscription warning wayfarers against quicksands. South of Ayr the road took to the shore at Greenan but thereafter avoided the rocky coast, and the modern road follows its track with only local deviations.

The student of economic developments is able from the Map to notice signs of industrial beginnings.⁷⁷ Coal pits are marked at Stevenston, Newton-upon-Ayr and Dailly. At the first two of these, steam engines are noted as having been installed, to pump water from the workings. At Dailly, burning coal seams are mentioned. At Stevenston, too, is shown the Saltcoats Canal, which was opened in 1772 and shares with the Monkland Canal the honours of being first in Scotland. Nearby at Stevenston were 'Fine Quarries' and lime quarries are shown in Dailly, Cumnock and New Cumnock parishes, samples of the many which were then being opened up all over the county to provide for the needs of the improving lairds and their tenant farmers. In New Cumnock were lead mines. Iron mines and a ruined forge at Muirkirk indicate the difficult beginnings of heavy industry. Salt pans appear at Prestwick, and a Sugar House at Ayr. The town plan of Ayr shows also breweries, the harbour, and—of particular interest—two coal waggon ways, precursors of the railway.⁷⁸ These scattered references, however, give no hint of the rapid and large-scale developments that would ensue in succeeding decades. The spectacular expansion of manufacturing, particularly of textiles, that had already begun, one could hardly expect to detect from a map.

Across the face of the Map are scattered items of miscellaneous interest.⁷⁹ The antiquarian cult of the 18th century no doubt prompted the numerous indications, by symbol and often name, of ruined castles and the remains of old religious houses like Kilwinning, Crossraguel and Fail. The 'Battle in 1263' at Largs is noted, and in Muirkirk parish Covenanters' graves are shown. Of special archaeological interest are the dozen cairns, camps, mottes, and other sites indicated. In addition there is a

77. See Gazetteer, Mineral and Industrial Undertakings.

78. For details of the early Ayrshire waggon ways, and of the Kilmarnock/Troon Railway of 1808, see *Ayrshire Collections*, Vol. 4, 199.

79. See Gazetteer, Miscellaneous Subjects.

mysterious cross in the parish of Tarbolton, several monuments, an occasional curious tree is considered worthy of representation, and there is an isolated ornithological note that 'Termagants' (ptarmigans) are to be found on Shalloch, the only place south of Stirling. Part of the charm and attraction of the Map lies in such unexpected miscellanea, recording little items of interest which the Armstrongs must have picked up from knowledgeable local people in the course of their survey of Ayrshire.

THE PLAN OF AYR

The 'Plan of the Town of Ayr' measures 16 inches by 12 inches and is on a scale of $13\frac{1}{2}$ inches to a mile. Not only is Ayr proper shown,⁸⁰ but the 'New Town' to the north.⁸¹ The River Ayr, as yet only partially dredged,⁸² is indicated; and on either side of its mouth the extensive sand, with 'Nicholas Rocks' (St. Nicholas Rock) to the south, and to the north unnamed 'Rocks' (Euchar Rock) and 'The Ulcer.'

Ayr in the 1770s was still a very small town, hardly increased in size from what it had been in mediaeval times,⁸³ a community of merchants and tradesmen, fishermen and sailors, and the residence of a number of gentlemen of independent fortune. The town layout was based on the converging High Street and Sandgate. The former was built up along its length, extending into Townhead (now Smith Street) and Cowgate (Alloway Street) as far as the old Overport and Cowport respectively, and leading on to the 'Turnpike Road to Maybole.'⁸⁴ From the High Street there led off (to the east) the Bridgegate and Mill Vennel, with probable 18th century building along what is now Mill Street; and (to the west) the un-named and tree-lined Newmarket Street, and the Carrick Vennel. The Sandgate was also built up, and extended beyond the old Sandgate Port alongside what was Sandgate House. On the seaward (west) side of the Sandgate were three un-named lanes; on the other (east) side Newmarket Street led to the High Street, and a new road (now Boswell Park) linked up with Carrick Vennel.⁸⁵

80. The River Ayr formed the northern boundary of the royal burgh and parish of Ayr.

81. What the Plan describes as the 'New Town' was actually the Burgh of Newton-upon-Ayr in the parish of Monkton and Prestwick and the newly-formed adjunct of Wallacetown eastwards in St. Quivox parish. Newton and Wallacetown are not named on the Plan, which thus anticipates their incorporation in Ayr a century later.

82. See *The Royal Burgh of Ayr*, ed. A. I. Dunlop, 1953, 208; also James Paterson, *History of the Counties of Ayr and Wigton*, Kyle, 1863, 88.

83. Cf. Plan of Ayr (reconstructed) in *Ayr Burgh Accounts*, 1534-1624, ed. G. S. Pryde, 1937, reprinted in *Royal Burgh*; and the 'Plan of the Citadel and Town of Ayr' by Hans Ewald Tassin, 1654, in the Carnegie Library, Ayr. The population of the pre-Reformation burgh of Ayr was somewhere between 1,500 and 2,000; hardly more than 2,000 in 1755; and 3,871 in 1791. *Royal Burgh*, 53, 59.

84. Contracted for in 1771. *Kyle*, 120.

85. For the streets of old Ayr, see *Royal Burgh*, 68-87. Newmarket Street was laid out in 1767. *Kyle*, 58.

At the meeting of the two principal thoroughfares stood the Market Cross,⁸⁶ further up the High Street were the Fish Cross and Meal Market, while in the middle of the Sandgate stood the Tolbooth and jail—which the engraver labels as 'Goal.'⁸⁷ Off High Street beside the river stood the Church—the Auld Kirk which had been transferred to that site in 1654⁸⁸—while in Mill Street stood a Brewery and the Poorhouse.⁸⁹ In Sandgate there was situated in its own grounds a dwelling known as Sandgate House.⁹⁰ To the west of the Sandgate was the isolated School House. Actually the Burgh School was in the Sandgate; this was an English School, the other being half-way up High Street.⁹¹ Other public buildings—the town hall near the Cross,⁹² and the Wallace Tower in the High Street⁹³—are not shown.

West of the town is shown the outline of the Citadel which had been erected during the Cromwellian occupation.⁹⁴ Inside this Fort area were the Tower of St. John,⁹⁵ a Brewery,⁹⁶ and a small circular symbol—one of several on the plan—which may represent a well. By the harbour stood the Sugar House⁹⁷ and various buildings including probably fishermen's cottages.⁹⁸ South of the Citadel was the communal Washing Green, an enclave in the Town Moor,⁹⁹ which extended southwards towards Alloway. This was traversed by undefined tracks leading from Sandgate, Carrick Vennel, and the Cowgate, and by the new

86. For illustration see *Royal Burgh*, Plate V; for fairs and markets see *Royal Burgh*, 182-196.

87. The old Tolbooth stood in the High Street. *Kyle*, 58n., 60, 61.

88. *Royal Burgh*, 111.

89. Established in 1756 and 'fit to receive 60 persons.' *Stat. Acc.*, I, 94.

90. Occupied by a cadet branch of the Boswells of Auchinleck, whence the name Boswell Park. *Royal Burgh*, 86.

91. See *Ayr Academy and Burgh Schule*, 1895. 'In 1755 the English master taught in the public or grammar school; and soon after a separate school-house was built near the Latin school-house, and near where the Academy now is.' p. 30. 'From 1773 there were two English schoolmasters and two English school-houses, "one nigh the Wallace Tower".' p. 38. In 1776 the Grammar School had 60 pupils and each of the two English schools had 50.

92. 'The town hall, or assembly room, situated near the Cross.' *Stat. Acc.*, XXI, 34. The new Town Buildings were not, however, built till 1832. *Kyle*, 60.

93. The Wallace Tower, otherwise known as the 'Auld Tour,' was rebuilt in 1834. *Kyle*, 61-64.

94. The Citadel area was assigned to the Earl of Eglinton, who obtained a charter establishing it as the burgh of barony of Montgomeriestoun in 1663. *Kyle*, 23. This was a sore point with Ayr burgh, and there were disputes as to the latter's authority over the area, in 1754 and 1787; the Court of Session upheld the independence of 'Montgomeriestoun.' *Kyle*, 24, 78. After 1755 the Earl of Cassillis was proprietor. Much of the stonework had been removed at the end of the 17th century. *Kyle*, 60.

95. The remnant of the original kirk, which had been transformed into the armoury and guardroom of the Citadel. *New Stat. Acc.*, V, p. 35. The Tower was taken over by Ayr burgh in 1784. *Kyle*, 24.

96. Brewing was carried on here intermittently throughout the century. *Royal Burgh*, 179; *Kyle*, 78. Beside the brewery was a 'large kiln.' *Stat. Acc.*, XXI, 42.

97. Built after 1770, but 'did not continue long employed.' *Stat. Acc.*, XXI, 45.

98. Possibly soap was manufactured here. There were three soap manufactories, one of which was established c.1770, where Dalblair House was later built, off Alloway Street (Cowgate). See *Contemporaries of Burns*, 55.

99. This was the Burrowfield, the original Five Pennylands of the burgh charter. *Royal Burgh*, 11.

Turnpike roads going from Townhead towards Maybole, and from Mill Vennel towards Cumnock and Dalmellington.¹⁰⁰

The only communication between the royal burgh and the 'New Town' north of the river was by the Bridge indicated on the Plan—the 'Auld Brig'¹—and by several fords which go unmarked.²

Newton-upon-Ayr was a burgh of barony whose land belonged to a group of forty-eight freemen.³ This agrarian community was being transformed by the development of new trades in the area north of the river, outwith the restrictive authority of the royal burgh and its incorporated trades. Not far from the shore was a group of coal pits,⁴ equipped with a steam engine, and with a Coal Waggon Way leading down to the harbour where a wharf was constructed for the export of coal to Ireland.⁵ Near the harbour⁶ shipbuilding and the associated trade of ropemaking was carried on,⁷ and there was some fishing.⁸

The 1,600 inhabitants of Newton⁹ were mostly lodged in one long thoroughfare to which the name of New Street is applied on the Plan. The greater part of its length, which actually was and is named Main Street, had to be wide enough to accommodate the lade running down to the mill on the bank of the River Ayr. At the north end there led off, by way of what is now Weaver Street, the turnpike road to the north. The only other street within Newton burgh was a short one east of Main Street, leading down to the river—the un-named Garden Street where Newton Castle had formerly stood.¹⁰ No public buildings are shown in Newton burgh—the church was not erected till 1777, a chapel of ease which became the parish church when Newton was disjoined from the parish of Monkton and Prestwick in 1779.¹¹

100. A road leaving Sandgate and crossing the River Doon at Doonfoot, shown on the County Map, is not indicated on the Plan. For further details of routes across this area, see p. 182, 211 foll., also *Kyle*, 117-120.

1. Possibly dating to the 13th century. *Royal Burgh*, 23. The New Brig, designed by Robert Adam, was erected between 1785 and 1788.

2. See *Royal Burgh*, 68.

3. Dating back to the 14th century. See G. S. Pryde, 'The Burghs of Ayrshire' in *Ayrshire Collections*, Vol. 4.

4. The two pits were sunk in 1765. *Kyle*, 80. In 1782 they were abandoned, but four years later an Edinburgh company recommended operations. *Stat. Acc.* must be wrong in assuming that it was this company which constructed the waggon way and installed 'a large steam engine . . . of 14 inch bore.' *Stat. Acc.*, II, 270.

5. *Kyle*, 88.

6. No details have been discovered about the proposed Dry Dock mentioned on the Plan. It was not, and could not have been, associated with the Act for Improving Ayr Harbour, 1772, since the north bank was outwith the authority of Ayr burgh.

7. These had been carried on 'for many years' and extended till by 1792 fifty hands were employed in shipbuilding and ten at the rope works. *Stat. Acc.*, II, 272.

8. *Stat. Acc.*, II, 273.

9. From about 300 or 400 early in the century and 600 in 1750, the population grew rapidly to 1,600 by 1778, and after a decline when the mining was suspended, rose again to 1,689 in 1791. *Stat. Acc.*, II, x, 266, 579.

10. *Stat. Acc.*, II, 264; *Kyle*, 163, 170. The castle had been demolished in 1701.

11. *Stat. Acc.*, II, 268.

The greater part of what the Plan describes as the 'New Town' was really outwith Newton burgh, in St. Quivox parish, and formed the new community of Wallacetown. In the later 17th century Sir Thomas Wallace of Craigie laid out Wallace Street on the east side of his residence at Newton Castle.¹² There were, however, fewer than a dozen dwellings there till, about 1760, a later Sir Thomas Wallace—father of Burns's correspondent, Mrs. Dunlop—began to feu out-houses and gardens.¹³ Cross Street and North Street (now together forming King Street) were added, and the Plan shows the beginnings of what would be Damside, Russell Street, George Street, and later extensions to the east, all to form a township of nearly 1,000 inhabitants by the 1790s.¹⁴ Most of these were immigrants. Some were respectable grain merchants and retired farmers. At the other extreme were disorderly vagrants who found free scope in this unpoliced area. But most were labouring folk coming from the West Highlands and Ireland, to find employment at the Lime Kiln some of them; many more in the Blackhouse pits;¹⁵ others on the Coal Waggon Way leading down to the River Ayr and along towards the harbour; while the new cotton weaving proved an increasing attraction.¹⁶ The area was served but inadequately by St. Quivox parish church several miles to the east in the rural area. In Wallacetown itself in 1766 a small Anti-burgher congregation was formed and in 1770 a Meeting House was erected.¹⁷

Armstrong's Plan of Ayr portrays the local metropolis at a crucial point in its development. The royal burgh, with nearly three thousand inhabitants crowded into its old town, was showing limited signs of growth; north of the river the two new conjoint communities had in a few decades grown up rapidly from miniscule beginnings and would together shortly surpass the old Ayr both in economic development and population growth. On a wider canvas this theme is repeated on all six sheets of the Map of the County—the old Ayrshire which had existed with few fundamental changes for hundreds of years being transformed into the new modern Ayrshire.

12. *Royal Burgh*, 82, n.2; also *Kyle*, 25.

13. *Stat. Acc.*, VII, 356.

14. *Stat. Acc.*, VII, 360.

15. One was near where Somerset Park now is, with an engine installed; the other was near the junction of the present King Street and George Street. The Blackhouse property was sold by Messrs. Alexander, Edinburgh merchants, in 1787, to the newly-formed Ayr Coal Company. *Kyle*, 671.

16. *Stat. Acc.*, VII, 357.

17. *Royal Burgh*, 121; see also Secession congregations, p. 127.